



This form will report compliance with your permit as determined by an Environment Agency officer

Site	LITTLE MARLOW STW (WOOBURNVALLEY), LITTLE MARLOW STW (WOOBURNVALLE, Y), BUCKS, -		Permit Ref	CNTD.0058	
Operator/ Permit holder	THAMES WATER UTILITIES LIMITED.				
Date	15/05/2021	Time in	16:30	Out	18:16
What parts of the permit were assessed	Wastewater Treatment Works / STW settled storm sewage, Wastewater Treatment Works tertiary treated sewage effluent				
Assessment Type	Site inspection: Wastewater Treatment Works - Operator Self Monitoring (OSM)	EPR Activity:	Water Discharge		
Recipient's name/position	Company Secretary, CAR form Inbox, [REDACTED]				
Officer's name	robert davis	Date issued	11/06/2021		

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details which conditions we have assessed, where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our [Compliance Classification Scheme](#) (CCS). For more details of our CCS scheme, contact your [local office](#).

KEY: C1, C2, C3, C4 = CCS breach category A = Assessed (no evidence of non-compliance)

Activities and Permit Conditions Assessed	CCS Category	Condition(s) breached
1 - Wastewater Treatment Works / STW settled storm sewage		
3.1a. Emission limit (e3)	C3	Schedule 1 Condition 9

Descriptive Works Fail	N/A	Number of breaches recorded	1
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If the total no of breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

This Compliance Assessment Report (CAR) has been sent to the Company Secretary, the CAR form inbox and Site Manager to ensure this matter is brought to the attention of Thames Water Utilities Limited (TWUL).

Following a member of the public reporting concerns (NIRS 01938720) about poor quality discharges from Little Marlow sewage treatment works (STW) into the River Thames we attended site to inspect the STW and to assess any environmental impact on the River Thames. TWUL staff on site declined to accompany the inspection. An unaccompanied inspection of the STW was undertaken using powers under Section 108 of the Environment Act 1995 and with caution and due regard for health and safety.

Inlet Works:

-> The inlet works was inspected. All three inlet screens appeared to be fully operational and it was confirmed that incoming flow was not overflowing into storm tanks.

Storm Tanks:

-> Storm tanks were inspected and were found to be empty and clean despite intermittent heavy rain showers in the area on the day of inspection.

Primary Tanks:

-> PST1 and PST3 appeared to be in full operation although both were accumulating some scum on the surface. PST2 was drained down and out of service which we understand from subsequent written correspondence from TWUL (see Waste.eda sent email of 22:14 on 15/5/21) was due to routine maintenance.

Activated Sludge:

-> The BNR was inspected and appeared to be fully operational. NH4-N was 11.7 mg/l at inlet to BNR and 7.77 mg/l at outlet and BNR2 had MLSS of 2529 mg/l.

Flow Measurement:

-> During the site inspection the MCERTS final effluent flow monitor was checked and the meter was reading 1068 l/s. The site has a flow to full treatment figure of 1442 l/s.

Final Settlement:

-> All four final settlement tanks (FSTs) were inspected. A substantial

amount of solids was being lost from each of the four FSTs presenting an environmental risk. This was evident visually in terms of the substantial quantity of solids weiring over into final effluent. This was not limited to pin-floc. There was also a substantial amount of vegetation growth on FSTs 1 and 2 which may impede the operational function of the FSTs.

Tertiary Treatment:

-> Tertiary treatment was not inspected. However, we have concerns in relation to the quality of the compensation flow to the River Wye which TWUL have advised us was back in operation prior to 15/5/21. Poor effluent quality (e.g. elevated solids over five times above the lower tier limit and iron limit sample failure) has the potential to adversely impact the River Wye and indeed the River Thames via the main final effluent discharge.

Final Effluent:

-> Final effluent was visually being impacted by the substantial amount of solids being lost from the four FSTs. The effluent was brown in colour instead of the visually clear effluent we would expect to see. Formal water samples were taken of the final effluent. These sample results indicated:

BOD: 18 mg/l against a lower tier permit limit of 20mg/l

Suspended solids: 190 mg/l against a lower tier permit limit of 35 mg/l

Ammoniacal Nitrogen as N: 0.82 mg/l against lower tier limit of 5mg/l

Iron: 6.4 mg/l (numeric sample failure) against maximum numeric permit limit of 5mg/l

Aluminium: 0.26 mg/l against maximum permit limit of 4 mg/l

TWUL's explanation of the unstable blankets was as follows (see Waste.eda sent email of 22:14 on 15/5/21): *"During the EA officer inspection the blankets became even more unstable due to peak flows to the treatment resulting in a very minor solids loss (pin-floc). No blanket loss was observed at any point today."*

The loss of solids (190 mg/l with metal sample failure) was not 'very minor' and was more than pin-floc although it was also clear to us by observation that this was not a sludge blanket loss. It is also the case the works was treating only c.1068 l/s which is just over two thirds of flow to full treatment / design capacity of the site (1442 l/s) so the effluent process should have been well within its comfort zone to produce high quality permit compliant effluent. The formal sample result for suspended solids was over five times above the lower tier permit limit and there was a metal numeric sample failure and corresponding numeric permit breach indicating a substantial loss of solids and iron and an issue / incident that should have been reported to the Environment Agency in accordance with *16_02 Recording and Categorising water industry self-reported pollution incidents* which states on page 11 of 28:

Final effluent quality

The water company should also report to the Environment Agency if it has reason to believe final effluent quality is in breach of upper tier limit levels or at a level of concern that is well above Look-Up Table (LUT) limit levels. The level of concern for a final effluent quality will vary from discharge to discharge but for example could be at three times the LUT limit level. There may be cases when the water company decides to report to the Environment Agency where effluent quality is at a lower

level of concern, for example at two times the LUT limit level.

We understand from staff on the site that blanket levels were being regularly monitored and that a known issue with suspended solids loss was being managed on site linked to the recommissioning and reintegration of FST 4 back into the process and that a lack of sludge age was contributing to blanket instability in FST4 with a potential knock on effect to the process.

We are concerned by the lack of FST resilience at Little Marlow STW following the earlier operational failure of FST 4 (see CAR form O/0743714 and O/07433863 following site inspections on 3/3/21 and 15/3/21). This lack of resilience has manifested itself in the site not being able to treat FFT over an extended time period resulting non-compliance and in large quantities of untreated (screened and storm tank settled only) and partially treated sewage (final effluent blended with screened and primary settled sewage) being discharged to the environment (see earlier CAR forms referred to above). The loss of solids observed on 15/5/21 seems to be further evidence of a lack of resilience in terms of FST provision at Little Marlow STW in terms of retention times and issues and permit non-compliance that we understand would not arise if the site had an additional fifth FST.

We understand an additional FST would address this lack of resilience and provide necessary protection to the environment so that in the event of any issues leading to a future loss of an FST, the full FFT of 1442 l/s can still be treated at all times. An additional FST would also make any routine maintenance of FSTs lower risk.

The environmental impact of the recent poor quality discharges to the River Thames from Little Marlow STW (see earlier CAR forms referred to above) and the categorisation of the incident(s) is currently under assessment.

Thank you for working with us to protect the environment.

Photograph 1 - Substantial vegetation growth in FSTs 1 and 2

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Photograph 2 - Substantial solids loss from all four FSTs

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Photograph 3 - Solids visually evident in final effluent

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Photograph 4 - Brown discolouration / solids being discharged into the River Thames

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Photograph 5 - Brown discolouration / solids being discharged into the River Thames

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Section 3- Enforcement Response		Only one of the boxes below should be ticked
You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.		
Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.		
In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.		
We will now consider what enforcement action is appropriate and notify you, referencing this form.		X

Section 4- Action(s)			
Where non-compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.			
Where the CCS Category is marked N/A then the specified action does not relate to a permit condition.			
Criteria Ref.	CCS Category	Action Required / Advised	Due Date
See Section 1 above			
1 - 3.1a	C3	Please ensure the permit is brought back into compliance by the due date. Please fully investigate, identify and address the root cause of this sample failure at Little Marlow STW and please update us on actions taken to prevent any reoccurrence.	18/06/2021
OA01	N/A	Please review company procedures and ensure TWUL report process issues / incidents in accordance with 16_02 Recording and categorising water industry self-reported pollution incidents and, where applicable, in accordance with permit notification conditions.	11/06/2021
OA02	N/A	We understand from recent serious process issues and sustained pollution from Little Marlow STW the site currently lacks FST resilience. Please explore the feasibility of installing a fifth FST and provide us with costings and timescale for delivery.	02/08/2021
OA03	N/A	FST 1 and FST 2 had a substantial amount of vegetation growth which may impede the operational function of the FSTs. Please remove this vegetation from all affected FSTs.	01/07/2021
OA04	N/A	Tertiary treatment was not inspected, but we have concerns about the quality of effluent being returned to the River Wye. Please inspect tertiary treatment to ensure disc filters are well maintained and not adversely impacted by solids in final effluent.	11/06/2021

Section 5 - Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- advise on corrective actions verbally or in writing
- require you to take specific actions in writing
- issue a notice
- require you to review your procedures or management system
- change some of the conditions of your permit
- decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you.

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and or suspension or revocation of the permit.
- A civil sanction Enforcement Undertaking (EU) offer may also be available to you as an alternative enforcement response for this/these offence(s).

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- ensure you comply with other legislative provisions which may apply.

Non-compliance categories

CCS category	Description
C1	A non-compliance which could have a major environmental effect
C2	A non-compliance which could have a significant environmental effect
C3	A non-compliance which could have a minor environmental effect
C4	A non-compliance which has no potential environmental effect

Section 6 – General Information

Data protection notice

The information on this form will be processed by the Environment Agency to fulfill its regulatory and monitoring functions and to maintain the relevant public register(s). The Environment Agency may also use and/or disclose it in connection with:

- offering/providing you with its literature/services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information Regulations request.

The Environment Agency may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The Environment Agency will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within 28 days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with the officer's line managers. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 03708 506 506 (Mon to Fri 08.00–18.00) and ask for the Customer Contact team or send an email to enquiries@environment-agency.gov.uk. If you are still dissatisfied, you can make a complaint to the Ombudsman. For advice on how to complain to the [Parliamentary and Health Service Ombudsman](#) phone their helpline on 0345 015 4033.